IN THE CLAIMS

Please cancel claims 1-28, 33, 35-37, 43, 45, and 46 without prejudice.

Please amend claims 29, 34, 38-40, 44, and 55 as follows:

Claims 1-28: Canceled

29. (Currently Amended) A computer-readable medium having stored and encoded thereon computer-executable instructions for ~~enhancing local searching~~ performing on a computing device an enhanced local search of web sites and intranets by mining user access logs, comprising:

segmenting the user access log into different browsing sessions;

generating ordered pairs of pages from the browsing sessions to find implicit links by using a gliding window to move over explicit paths of the browsing sessions to generate the ordered pairs of pages;

determining a frequency of each of the ordered pairs;

defining a minimum support threshold;

applying the minimum support threshold to the frequency of each of the ordered pairs;

filtering the ordered pairs to remove any ordered pairs that are infrequently occurring;

constructing an implicit links graph from the implicit links;

generating two-item sequential patterns from the ordered pairs;

updating the implicit links graph using the two-item sequential patterns;

re-ranking search results obtained from a search engine to enhance the local searching to produce updated search results; and

displaying the updated search results to a user.

30. (Original) The computer-readable medium of claim 29, further comprising pre-processing the user access log using at least one of: (a) data cleaning; (b) browsing session identification; (c) consecutive repetition elimination.

31. (Original) The computer-readable medium of claim 29, further comprising identifying each individual ones of the browsing sessions.

32. (Original) The computer-readable medium of claim 31, further comprising identifying in terms of a user identification and a chronological order of pages.

33. (Canceled)

34. (Currently Amended) The computer-readable medium of claim ~~33~~ 29, further comprising defining the gliding window size, wherein the size represents a maximum interval a user clicks between a source page and a target page.

35. (Canceled)

36. (Canceled)

37. (Canceled)

38. (Currently Amended) The computer-readable medium of claim ~~37~~ 29, further comprising discarding an ordered pair if its frequency is below the minimum support threshold.

39. (Currently Amended) The computer-readable medium of claim ~~37~~ 29, further comprising keeping an ordered pair if its frequency is above the minimum support threshold.

40. (Currently Amended) A computer-implemented method contained on computer-readable media having computer-executable instructions for execution on a computing device for enhancing initial search results of a search engine performing a local search of a web sub-space using a user access log, comprising:

pre-processing the user access log;

segmenting the log into browsing sessions;

generating ordered pairs of implicit links from the browsing sessions;

filtering the ordered pairs using a minimum support threshold to remove any infrequently occurring ordered pairs to generate two-item sequential patterns;

updating an implicit links graph using the two-item sequential patterns;

defining an adjacency matrix to describe the updated implicit links graph;

defining a modified re-ranking formula in terms of the adjacency matrix;

modifying the re-ranking formula using a random walk technique;

re-ranking the initial search results using the updated implicit links graph to generate enhanced search results; and

displaying the enhanced search results to a user.

41. (Original) The computer-implemented method as set forth in claim 40, further comprising discarding any ordered pairs having a frequency below the minimum support threshold.

42. (Original) The computer-implemented method as set forth in claim 40, further comprising keeping any ordered pairs having a frequency above the minimum support threshold.

43. (Canceled)

44. (Currently Amended) The computer-implemented method as set forth in claim ~~43~~ 40, further comprising computing a page rank using the adjacency matrix.

45. (Canceled)

46. (Canceled)

47. (Original) The computer-implemented method as set forth in claim 40, further comprising discarding any ordered pairs having a frequency below the minimum support threshold.

48. (Original) The computer-implemented method as set forth in claim 47, wherein the random walk technique further comprises a probability parameter.

49. (Original) The computer-implemented method as set forth in claim 40, wherein re-ranking further comprises using an order-based re-ranking technique.

50. (Original) The computer-implemented method as set forth in claim 49, wherein the order-based re-ranking technique further comprises using a linear combination of page positions contained on two lists.

51. (Original) The computer-implemented method as set forth in claim 50. wherein one of the two lists is sorted by similarity scores.

52. (Original) The computer-implemented method as set forth in claim 50, wherein one of the lists is sorted by PageRank values.

53. (Original) The computer-implemented method as set forth in claim 40, wherein re-ranking further comprises using an score-based re-ranking technique.

54. (Original) The computer-implemented method as set forth in claim 53, wherein the score-based re-ranking technique further comprises using a linear combination of a content-based similarity score and a PageRank value of all pages.

55. (Currently Amended) An implicit links search enhancement system for an enhancing initial search results obtained from a search engine by mining a user access log, comprising:

a general-purpose computing device;

a computer program comprising program modules executable by the general-purpose computing device, the computer program further comprising:

an ordered pairs generator that extracts implicit links from the user access log and generates ordered pairs of the extracted implicit links ~~from the user access log~~;

an update module that updates an implicit links graph using the ordered pairs;

a re-ranking module that re-ranks the initial search results based on a modified link analysis technique to generates enhanced search results; and

a display device in communication with the general-purpose computing device on which the enhanced search results are displayed.

56. (Original) The implicit links search enhancement system as set forth in claim 55, further comprising a user access log pre-processing module for pre-processing the user access log.

57. (Original) The implicit links search enhancement system as set forth in claim 56, wherein the pre-processing module performs at least one of: (a) data cleaning; (b) identification of browsing sessions within the user access log; (c) consecutive repetition elimination.

58. (Original) The implicit links search enhancement system as set forth in claim 55, further comprising a user access log segmentation module that segments data in the user access log into individual browsing sessions.

59. (Original) The implicit links search enhancement system as set forth in claim 55, further comprising a filter module that removes any infrequently occurring ordered pairs.

60. (Original) The implicit links search enhancement system as set forth in claim 55, wherein the a modified link analysis technique includes a modified re-ranking formula and at least one re-ranking technique.

61. (Original) The implicit links search enhancement system as set forth in claim 60, wherein the modified re-ranking formula is modified by using a random walk technique and a probability parameter.

62. (Original) The implicit links search enhancement system as set forth in claim 60, further comprising an order-based re-ranking technique.

63. (Original) The implicit links search enhancement system as set forth in claim 60, further comprising a score-based re-ranking technique.